Neonicotinoid Pesticide Issues

U.S. Department of Agriculture
Forest Service
Northeastern Area State and Private Forestry

Description: Neonicotinoids (neonics) are a class of insecticide taken up by the plant vascular system and distributed throughout the plant. Insects feeding on any plant parts over a period of time, can receive a lethal dose. The main concern is how these products affect foraging pollinators and other non-target organisms. Pesticides, in general, have been linked to colony collapse disorder in honey bees, *Apis spp*. In addition to insects, other wildlife may be affected as well.

Key Issue: The US Fish and Wildlife Service (USF&WS) recently issued a memo indicating the agency would discontinue the use of genetically modified organisms (crops) and neonicotinoid pesticides (specifically imidacloprid). Forest Service staff and state cooperators are concerned about how the actions of the USF&WS would impact current agency forest health programs (hemlock woolly adelgid, emerald ash borer, and Asian longhorn beetle).

Project Information and Status: There are several methods of application for neonics including dusting, granule dispersal, ground injection and trunk injection. The specific method targeted by the USF&WS is imidacloprid dust treated seed. The concern here is that during the planting process, insecticidal dust is dislodged and becomes airborne and drifts to non-target plants and/or habitats. Once this happens, the area is contaminated and potential for non-target organisms to be affected by the pesticide is increased. In addition, if treated seed is not properly covered, it can be removed from the site by wildlife using the seed for food. Neonics are highly water soluble and can move over land with large rain events. There is concern with flooding rain events over agricultural fields planted with treated seed.

The US Forest Service has guidelines and policies (FSM 2150, FSM 3400 and FSH 2109) in place that promote the use of integrated pest management as well as best management practices for the use of pesticides.

The Forest Health Protection (FHP) program is responsible for providing pesticide use expertise to the agency and other groups. To that end, FHP has contracted an outside organization to write Human Health and Ecological Risk Assessments (HHERA) on the most commonly used pesticides in the FS. These documents are used across the agency (and by other Federal agencies) by FS personnel to guide their pesticide use actions. HHERA are thoroughly researched documents using the most rigorous scientific methods. The contractor uses US Environmental Protection Agency (EPA) methodology in creating these documents. This method has been rigorously tested and accepted. The HHERA for imidacloprid will be updated this next calendar year in order to capture new scientific information on that chemical. All HHERA can be viewed at this website: http://www.fs.fed.us/foresthealth/pesticide/risk.shtml

The Agency's uses of neonics, including imidacloprid, are documented in the HHERA. Forest Service uses are generally confined to liquid type formulations that are injected into the tree or ground. This practice significantly reduces the potential for airborne drift of the chemical. Applicators are trained and certified whether they are FS personnel or contractors. All label directions are followed in accordance with the law.

This is a problem for the Eastern States. Currently, FHP personnel responsible for pesticide use in Regions 8 and 9 and Northeastern Area are collaborating with the WO, USDA Office of Pest Management Policy (OPMP) and EPA on neonicotinoid issues. We have responded to a request from OPMP for the FS programs that might be impacted by cancellation of neonicotinoid pesticides (HWA, EAB, and ALB). Personnel are engaged on the issue and communicating as necessary any new information.

Imidacloprid is on the EPA list for (re)registration. This process looks at all use patterns for a chemical, new research on the chemical and any issues that have come up since the last review. (Re)Registration will consider all issues surrounding imidacloprid including whether there are alternative pesticides available. This process usually takes two to three years to complete. At this point there is no indication from EPA that neonicotinoid insecticides will be cancelled or suspended. Cancellation means that any supplies of a particular pesticide currently on hand can be used in accordance with the current label on the product until supplies are exhausted. If a product is suspended, it means that it must be returned to the manufacturer for destruction. No amount of that pesticide may be used after the suspension date.

Future Direction: This brief will be updated by USFS FHP staff as needed. If you have questions, please contact John Kyhl, NA pesticide used coordinator at jkyhl@fs.fed.us or 651-649-5265 or Michelle Frank, Region 8 pesticide use coordinator at mfrank@fs.fed.us or 404-347-2229.

Tony L. Ferguson, Director
11 Campus Blvd., Suite 200
Newtown Square, PA 19073
610–557–4103 (–4177 FAX)
tferguson@fs.fed.us

www.na.fs.fed.us

Ralph H. Crawford, Asst. Director
of Forest Health and Economics
11 Campus Blvd., Suite 200
Newtown Square, PA 19073
610–557–4029 (–4136 FAX)
rcrawford01@fs.fed.us

John F. Kyhl,
NA Pesticide Use Coordinator
1992 Folwell Avenue,
St. Paul, MN 55108.
651-649-5265 (–5238 FAX)
jkyhl@fs.fed.us

9/19/2014